CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88-086

NPDES NO. CA0028134

WASTE DISCHARGE REQUIREMENTS FOR:

UNION CARBIDE CORPORATION
LINDE DIVISION
PITTSBURG, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereafter called the Board), finds that:

1. Union Carbide Corporation, Linde Division (hereinafter called the discharger), submitted an NPDES Permit Application dated October 9, 1985 and amended it by letter dated December 11, 1987 for reissuance of NPDES Permit No. CA0028134.

2. The discharge of wastewater from the facilities is currently governed by Waste Discharge Requirements, Board Order Nos. 76-72 and 81-23.

3. The discharger produces 410 tons per day of industrial gases (oxygen, nitrogen, and argon) and currently discharges wastewater containing pollutants into an unnamed drainage ditch which flows into Kirker Creek at a point just north of the plant. Kirker Creek is tributary to New York Slough, and both are waters of the United States.

4. The report of waste discharge describes the waste discharge (E-001) as follows:

   a. Waste 001A consists of an average 1440 gallons per day (gpd) of compressor condensate wastewater. This waste is treated for oil & grease removal prior to final discharge.

   b. Waste 001B consists of an average of 86.4 gpd of truck and equipment washwater. This waste is also treated for oil & grease removal prior to final discharge.

   c. Waste 001C consists of an average of 1152 gpd of stormwater runoff from the process area and is also treated for oil & grease removal prior to final discharge.

   d. Waste 001D consists of an average of 30,096 gpd of filter backwash water. This waste does not receive any treatment prior to discharge.

e. Waste 001E consists of an average of 11,865 gpd of cooling tower blowdown. This waste does not receive any treatment prior to discharge.

5. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986, and the State Water Resources Control Board approved it on May 21, 1987. The provisions of this permit are consistent with the revised Basin Plan.

6. The beneficial uses of Suisun Bay, Delta and contiguous water bodies are:

   a. Water contact recreation
   b. Non-contact water recreation
   c. Navigation
   d. Ocean commercial and sport fishing
   e. Wildlife habitat
   f. Estuarine habitat
   g. Fish spawning and migration
   h. Industrial process and service supply
   i. Preservation of rare and endangered species
   j. Shellfish harvesting

7. The Basin Plan prohibits the discharge of wastewaters with characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water or dead-end slough or similar confined water areas or their immediate tributaries. The receiving water for this discharge constitutes a nontidal water or dead-end slough.

8. The Basin Plan provides for an exception to the prohibition for discharges where:

   a) an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or

   b) a discharge is approved as part of a reclamation project; or

   c) it can be demonstrated that net environmental benefits will be derived as a result of the discharge.

9. The discharger has requested an exception be granted to the prohibition described in Finding 8 under criterion (a) above based on the discharger's proposal to achieve an equivalent level of environmental protection by:

   a. Changing the anti-corrosion and biocides chemicals added to the cooling tower.

   b. Investigating the potential sources of heavy metals in the discharge and implementing corrective actions (such as treatment systems and

equipment modifications) to reduce the concentration of these metals in the discharge.

c. Using a different source of make-up water for the cooling tower (groundwater versus Contra Costa Canal water).

d. Providing treatment (clarification and flocculation) to their filter's backwash waters prior to discharge to the creek (whenever Contra Costa Canal water is used as the make-up water source to the cooling tower).

10. Based on Finding 9 and the nature and volume of the discharge, the discharger qualifies for an exception to the Basin Plan prohibition described in Finding 7. The discharger is exempted from the prohibition provided it complies with the equivalent level of environmental protection plan and this order.

11. Effluent limitation and toxic effluent standards established pursuant to Sections 301, 304, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.

12. Effluent limitation guidelines requiring the application of the best practicable control technology currently available (BPT) have been promulgated by the U.S. Environmental Protection Agency (EPA) for the compressor condensate wastewater for the Oxygen and Nitrogen Production Subcategory 40 CFR Part 415.490. Effluent limitations of this Order for the compressor condensate wastewater are based on these guidelines The limitations are considered to be those attainable by BPT, in the judgement of the Board. Effluent limitations of this order for the final discharge are based on the Basin Plan, other State plans and policies, current plant performance, and best professional judgement.

13. EPA will not promulgate effluent limitation guidelines requiring the application of best available technology (BAT) for this industry subcategory in accordance with paragraph 8 of the 1976 NRDC Settlement Agreement.

14. Under 40 CFR 122.44, "Establishing Limitations, Standards, and Other Permit Conditions," NPDES permits should also include toxic pollutant limitations if the discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct. This permit may be modified prior to the expiration date, pursuant to 40 CFR 122.62 and 124.5, to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge.

15. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21110) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

16. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

17. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The discharge of all conservative toxic and deleterious substances above those levels which can be achieved by a program acceptable to the Board is prohibited.

B. Effluent Limitations

1. The discharge of Waste E-001 containing constituents in excess of the following limits is prohibited:

Constituent	Units	Averages 30-day	Averages 7-day	Daily Maximum
Oil & Grease	mg/l	10	--	20
Settleable Solids	ml/l-hr	0.1	--	0.2
TSS	mg/l	30	45	--

2. The discharge of Waste E-001 containing heavy metals in excess of the following limits is prohibited:

Constituent	Units	Daily Maximum
Arsenic	ug/l	20
Cadmium	ug/l	10
Hexavalent Chromium (1)	ug/l	11
Copper	ug/l	20
Lead	ug/l	5.6
Mercury	ug/l	1
Nickle	ug/l	7.1

Constituent	Units	Daily Maximum
Silver	ug/l	2.3
Zinc	ug/l	58

(1) The Discharger may meet this limit as total chromium

3. The discharge of compressor condensate wastewater or Waste E-001A containing constituents in excess of the following limits is prohibited:

Constituent	Units	Averages 30-day	Averages 7-day	Daily Maximum
Oil & Grease	mg/l	68.2	--	137
	kg/day	0.37	--	0.74

4. The pH of the waste shall not exceed a ph of 8.5 or be less than 6.5

5. The waste shall meet the following limits of toxicity:

   The survival of three-spine stickleback and rainbow trout (or fathead minnow) in a 96-hour static-renewal bioassay of the effluent as discharged shall achieve a median of 90% survival for three consecutives samples and a 90 percentile value of not less than 70% survival for ten consecutive samples.

6. The temperature of the waste shall not exceed 86 F.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the state at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

   a. Dissolved oxygen: 7.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

   b. Dissolved sulfide: 0.1 mg/l maximum.

   c. pH: The ph shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

   d. Un-ionized Ammonia (as N): 0.025 mg/l Annual Median
      0.16 mg/l Maximum at any time

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.

2. The discharger shall comply with the limitations, prohibitions, and other provisions of this order immediately upon its adoption by the Board except as noted below.

3. The discharger shall comply with the equivalent level of environmental protection plan as described in Finding 9 and effluent limitations B.2 by January 2, 1989. A report on progress toward compliance shall be submitted to the Executive Officer by September 2, 1988.

4. The discharger shall comply with effluent limitations B.3 by June 2, 1989. A report on progress toward compliance shall be submitted to the Executive Officer by December 2, 1988.

5. The discharger shall comply with the Self-Monitoring Program as adopted by the Board. Upon review of the data submitted as part of

this program, pursuant to EPA regulations 40 CFR 122.62, 122.63, and 124.5, the Board may at any time, revise the Order.

6. The discharger shall develop and submit a Best Management Practices (BMP) program to the Board by October 1, 1988. The BMP program shall be consistent with the EPA regulations 40 CFR 125, Subpart K and the general guidance contained in the "NPDES Best Management Guidance Document", EPA Report No. 600/9-79-045, December 1979 (revised June 1981). A BMP program acceptable to the Executive Officer shall be implemented by April 1, 1989.

7. The discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements" dated December 1986, except items B.3 and C.11.

8. The discharger shall review and update by November 1 each year its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

9. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).

10. Pursuant to Environmental Protection Agency regulations [40CFR122.42(a)] the discharger must notify the Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

11. This permit shall be modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(c), and (d), 303, 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

    (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or,

    (b) Controls any pollutant not limited in the permit.

    The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicabble.

12. Order No. 76-72 is hereby rescinded.

13. This Order expires on April 16, 1993 and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

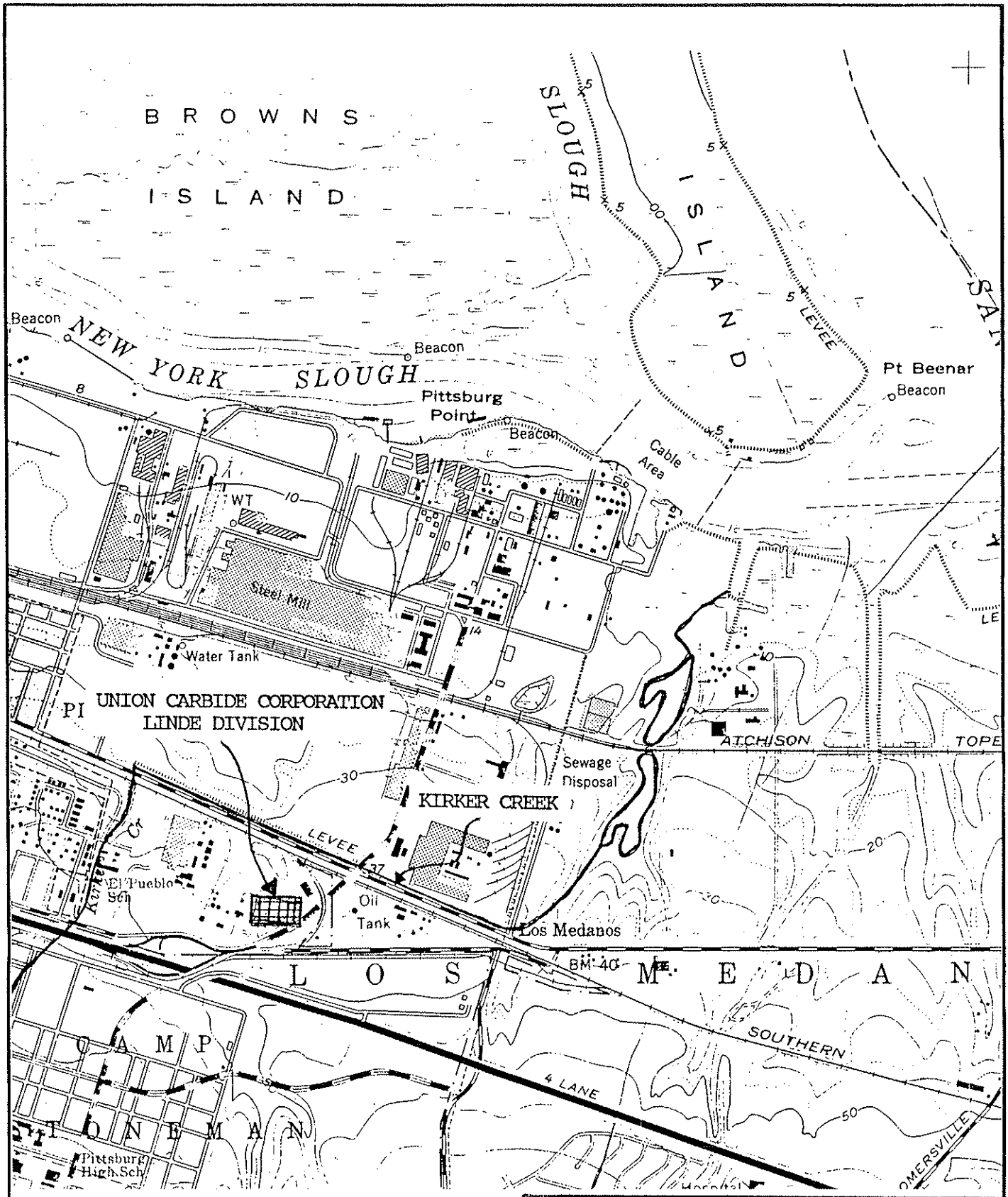
14. This Order shall serve as a National Pollutant Discharge Elmination pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing, provided the Regional Administration, U.S. Environmental Protection Agency, has no objections.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on .

ROGER B. JAMES
Executive Officer

Attachments:

Location Map
Standard Provisions and Reporting Requirements dated December 1986
Resolution No. 74-10
Self-Monitoring Program



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

LOCATION MAP
UNION CARBIDE CORPORATION
LINDE DIVISION

DRAWN BY:	DATE: 5/1/58	DRWG. NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

UNION CARBIDE COMPANY

LINDE DIVISION

PITTSBURG, CONTRA COSTA COUNTY

NPDES NO. CA 0028134

ORDER NO. 88-086

CONSISTS OF

PART A, DATED DECEMBER 1986

AND

PART B,

SELF-MONITORING PROGRAM

PART B

DESCRIPTION OF SAMPLING STATIONS
AND
SCHEDULE OF SAMPLING, ANALYSIS & OBSERVATIONS

I. Sampling Station Location/Description

EFFLUENT

Station	Description
E-001	At any point in the outfall from the plant facilities between the point of discharge to the drainage ditch and the point at which all waste tributary to that outfall are present.
E-001A	At the outfall, where the effluent from the oily water separator is discharged.

II. Schedule of Sampling, Analysis & Observations

A. The schedule of sampling and analysis shall be that given in Table 1 (attached).

B. Sample collection, storage, and analysis shall be performed according to the latest 40 CFR Part 136 or other methods approved and specified by the Board

III. MISCELLANEOUS REPORTING

A. In addition to the maximum, minimum, and average effluent pH values, the following information about effluent pH violations shall be reported each month (report separately for over and under the pH limitations):

a. Percent of time effluent pH was outside the limitations.

b. Number of events when pH was outside the limitations.

c. Total (cumulative) hours and minutes that pH was outside the limitations.

d. Duration of the longest continuous period of such violation.

Note that strip charts of the effluent pH record must be retained with other laboratory records, and made available for inspection by Board staff.

B. The discharger shall retain and submit (when required) the following information concerning the monitoring program for organic and metallic pollutants.

a. Description of sample stations, times, and procedures.

b. Description os sample containers, storage, and holding time prior to analysis.

c. Quality assurance procedures together with any test results for replicate samples, sample blanks, and any quality assurance tests, and the recovery percentages for the internal and surrogate standards.

IV. MODIFICATIONS TO PART A

Exclude paragraphs D.1.A, D.4., and D.5.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established by this Board.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions may be ordered by the Executive Officer or Regional Board.

Roger B. James

ROGER B. JAMES
Executive Officer

Effective Date MAY 20 1988

Attachments:
Table 1

TABLE I

SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

Station	Constituent	Unit	Type of Sample	Frequency of Analysis
E-001	Flow	gpd	continuous	continuous (1)
	Oil & Grease	mg/l kg/day	grab	biweekly
	TSS	mg/l	24-hour-composite	weekly
	pH	pH units	continuous	continuous
	settleable solids	ml/l-hr	grab	weekly
	Temperature	F		weekly
	TDS	mg/l	grab (when cooling tower blowdown is being discharged to outfall)	monthly
	Arsenic	ug/l kg/day	24-hour composite	yearly
	Cadmium	ug/l kg/day	24-hour composite	yearly
	Chromium, Total	ug/l kg/day	24-hour composite	weekly
	Copper	ug/l kg/day	24-hour composite	weekly
	Silver	ug/l kg/day	24-hour composite	yearly
	Lead	ug/l kg/day	24-hour composite	yearly
	Mercury	ug/l kg/day	24-hour composite	yearly

Station	Constituent	Unit	Type of Sample	Frequency of Analysis
E-001	Nickel	ug/l kg/day	24-hour composite	yearly
	Zinc	ug/l kg/day	24-hour composite	weekly
	Selenium (2)	ug/l kg/day	24-hour composite	yearly
	Toxicity	% survival	composite (3)	monthly
	All Applicable Standard Observations			monthly
E-001A	Flow	gpd	continuous	continuous when discharging
	Oil & Grease	mg/l kg/day	grab	weekly (1)

LEGEND

FREQUENCY OF ANALYSIS

Weekly= once each week
Monthly= once each month
Yearly= once each year
Biweekly= once every two weeks

FOOTNOTE

1) Oil & Grease sampling shall consist of 3 grab samples taken at 2-hour intervals during the sampling day, with each grab being collected in a glass container. The entire volume of each sample shall be composited prior to analysis. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.

2) Selenium must be analyzed only by the atomic absorption, gaseous

hydride procedure (EPA Method No. 270.3/Standard Method No. 303E).

3) The bioassay test shall be a static-renewal test using two test fish species (stickleback, and rainbow trout or fathead minnow). In the static renewal test, the test water is replaced with daily 24-hour composite effluent samples.